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| Sr. No | Practical |  |
| 1. | 1. Write a Java program to display greeting message like: “First Java Program….” on console. 2. Write a Java program to display all primitive type variables. Also display your name in the last line. 3. Write a Java Program that check whether user entered number is palindrome or not. For example, 121 is a palindrome number because if you read it backward, it is still 121. 4. Write a Java program using class that prints the numbers 1 to N (N must be scan from the user). For all multiples of 3 print “Bizz” and for all multiples of 5 print “Fizz”. For multiples of both 3 and 5 print “Bizz-Fizz”. |  |
| 2. | 1. Write an interactive program to print a string entered in a pyramid form. For instance, the string “stream” has to be displayed as follows:   S  S t  S t r  S t r e  S t r e a  S t r e a m   1. Write an interactive program to print a diamond shape. For example, if user enters the number 3, the diamond will be as follows:   \*  \* \*  \* \* \*  \* \*  \* |  |
| 3 | 1. Write a Java program to create a class Distance which consists of two coordinates as data members and a constructor which initializes the values of coordinates and a method which calculates the distance between two coordinates. 2. Design a program to Demonstrate concept of constructor. Create a class called 'TIME' that has:   a. three integer data members for hours, minutes and seconds  b. constructor to initialize the object to zero  c. constructor to initialize the object to some constant value  d. member function to add two TIME objects  e. member function to display time in HH:MM:SS format   * 1. f. Write a main function to create two TIME objects, add them and display the result in HH:MM:SS format. |  |
| 4 | 1. Write a java program to create an abstract class named Shape that contains two integers and an empty method named printArea(). Provide three classes named Rectangle, Triangle and Circle such that each one of the classes extends the class Shape. Each one of the classes contain only the method printArea( ) that prints the area of the given shape. 2. Write a Java program to create an abstract class Vehicle with abstract methods startEngine() and stopEngine(). Create subclasses Car and Motorcycle that extend the Vehicle class and implement the respective methods to start and stop the engines for each vehicle type. Also add the function which defines the special characteristics (Company name, Model number, Number of wheels) of Car and Motorcycle in their respective class. |  |
| 5 | Write a Java program that creates a class hierarchy for employees of a company. The base class should be Employee which is containing name, address, basic salary, and job title for each employee. There are two subclasses Manager, Developer. Design a program for calculating increment based on the category of the employee. i.e Manager should be given 10%, Developer should be given 8%. (the increment is applicable on basic salary) |  |
| 6 | An interface Polygon containing the members as given below:  void calcArea( ); abstract method to calculate area of a particular polygon given its dimensions  void calcPeri( ); abstract method to calculate perimeter of a particular polygon given its dimensions  void display( ); method to display the area and perimeter of the given polygon.  Create a class Square that implements Polygon and has the following member:  float side  Square(float s); constructor to initialize side of square  Create another class Rectangle that implements Polygon and has the following member:  float length  float breadth  Rectangle(int len, int bre); constructor to initialize length and breadth of a rectangle  Outside the package, create a class that imports the above package an instantiates an object of the Square class and an object of the Rectangle class. Call the above methods on each of the classes to calculate the area and perimeter given the side and the length/breadth of the Square class and the Rectangle class respectively. |  |
| 7 | 1. Write a Java program to create an interface Playable with a method play() that takes no arguments and returns void. Create three classes Football, Volleyball, and Basketball that implement the Playable interface and override the play() method to play the respective sports. |  |
| 8 | 1. Write a Java Program which asks user to enter a paragraph and perform the following operations:    1. a. Find total no of sentences in the paragraph and the total number of words in each sentence.    2. b. Find the total number of characters in the entire paragraph and find out the occurrence of each character in the paragraph and display the information in proper format.    3. c. Search a word (entered by the user) in the paragraph and print the position of the word (if found) or print appropriate message. |  |
| 9 | Create an exception subclass Lowbalance, which prints “Low Balance” along with the balance. Wright a class exceptionDemo in which method test() throws LowBalance exception if the variable balance passed to it as argument is less than 1000. Write main() function to show the working of program. |  |
| 10 | 1. Design use case diagram for your system. 2. Design class diagram for your system. |  |